

**REMARKS****Support for Claim Amendments:**

Support for the claim amendment can be found throughout the specification, and in particular on page 4, lines 16 through 23 and page 5 lines 8-22 (e.g., reducing one or more symptoms of a vascular disorder or event); page 2, lines 12 through 24 (e.g., normal levels of total-C and LDL-C); page 2, line 25 through page 3, line 2 (e.g., amounts of administration of a statin of 5 to 250 mg/day) and page 10, lines 16 through 26 (e.g., vascular treating compounds).

**Specification**

The examiner objected to the use of certain trademarks in the specification. The applicant, as suggested by the examiner, has capitalized the trademarks referenced in the office action and used generic terminology after them. Accordingly, the objection has been obviated.

**Claim Rejections - 35 U.S.C. §112**

The examiner rejected claims 22-23, and 27-28 under 35 U.S.C. § 112, first paragraph because of the use of the recitation of “preventing myocardial infarction”. The applicant has amended the claims to remove reference to this phrase.

Claim 13 was rejected because it did not state the particular vascular treating compound. The applicant has amended claim 13 to indicate specific vascular treating compounds.

Claim 11 was rejected because it did not state the ranges for Total-C and LDL-C levels. The applicant amended claim 2 and 11 to state specific ranges.

Claims 1, 9, 22, 23, and 27 were rejected under 35 U.S.C. §112, second paragraph because of the recitation of “effective amount” in claims 2 and 10. The applicant has amended the claims to remove the term “effective” and to include a specific range of amounts.

Claims 12 and 13 were rejected because of the use of the term “about”. The applicant has removed all occurrences of this term from the claims.

The applicant has addressed all of the examiner’s §112 concerns, and has therefore obviated this rejection.

Claim Rejections - 35 U.S.c. §103(a)

The Examiner rejected claims 1-4, 22, 23, 27 and 28 under 35 U.S.C. §103(a) as being unpatentable over Whitney et al.

Pursuant to an interview with the Examiner on January 30, 2008, the Examiner withdrew cited references that were not provided on form PTO-892. Specifically, those references are “Orloff”, “DeBonis et al”, and “Novac et al.” The Examiner, in her interview summary, does not consider them to be relevant prior art. Accordingly, the applicant will argue the merits of the rejection on the main reference, namely, Whitney et al (US Patent No. 6,180,660 B1), hereinafter Whitney.

The Examiner rejected the above claims because Whitney teaches methods for preventing or reducing the risk of a first occurrence of a cardiovascular event using an HMG-CoA reductase inhibitor along or in combination with another lipid altering agent. According to the examiner, subjects to be treated in Whitney are those having an average to mildly elevated serum total cholesterol level (less than or equal to 260 mg/dL). The examiner states that it would be obvious to one skilled in the art to employ the results found in Whitney with a reasonable expectation of success because of the clear treatment of myocardial infarction achieved by the elected statin, atorvastatin. Additionally, the examiner indicates that the explanation of an effect obtained when using a compound cannot confer novelty on a known process, e.g., even if the reducing of PAR-1 or PAR-4 levels was not itself recognized as a pharmacological effect of administering the elected statin, such an effect is already known in the art.

The applicant respectfully disagrees. The applicant is not attempting to patent an effect obtained when using the compound. On the contrary, the claimed invention is changing the steps of how individuals are being treated. In particular, the claimed invention is changing how an individual is assessed, and changing the steps that one undergoes in treating a thrombotic event, such as a myocardial infarction. The examiner in her arguments indicates that the claimed invention involves the administration of a statin which has an effect on PAR-1 or PAR-4 levels. Rather the opposite occurs. The claimed invention involves *assessing* the levels of PAR-1, PAR-4 or both to determine if the individual should receive statin administration. The claimed invention has a selection step, specifically step a) of each independent claim, in selecting specific candidates for treatment, a step not mentioned nor contemplated in the cite art at all. The

applicant is not claiming a mechanism of action. Instead, the applicant is claiming a way to select individuals for treatment, a step not considered by one of skill in the art. No one of skill in the art understood that increased levels of PAR-1 or PAR-4 are indicators for statin administration. This is not just an observation, but a change in the clinical application of administering statins by first selecting the proper candidate for administration. Hence, the applicant has obviated this rejection.

Additionally, the methods of the present invention are not limited only to those individuals with certain levels of cholesterol. As described above, the indication for statin administration is increased levels of PAR-1 and/or PAR-4, which are assessed/selected as a step of the claimed method. An individual is selected for these levels through various methods of assessing PAR-1 or PAR-4 levels. See specification pages 13, line 3 through page 18, line 25 for a lengthy discussion of PAR-1/PAR-4 assessment to select individuals that are candidates for undergoing the steps of the present invention. As such, individuals who may *not* have elevated levels of cholesterol, but elevated levels of PAR-1 or PAR-4 will be selected for statin administration according to the claimed method. Accordingly, the claimed invention is not practiced nor suggested by the cited art, and in particular, this scenario is not described in any way.

Assuming *arguendo* that a *prima facie* case of obviousness is established, the assessment of PAR-1 or PAR-4 as an indication of statin administration is surprising and unexpected. In fact, it was not clearly understood by the cited art why or how PAR-1 or PAR-4 works. In particular, in the cited art, there is no direct connection of PAR-1 or PAR-4 and its interaction with statins, especially as an indicator for its administration for treatment of a thrombotic event. There is no indication in the cited art whatsoever that increased levels of PAR-1 or PAR-4 warrant statin administration. It is surprising to one of skill in the art to learn the increased levels of PAR-1 or PAR-4 are good indicators of statin administration. This is evidenced by the following scenario with respect to Whitney. In Whitney, administration of HMG-CoA is taught for an individual who is at risk for a cardiovascular event and who has a level of HDL less than 50 mg/dL and no history of coronary heart disease. As stated above, there is no teaching of selecting individuals having increase levels of PAR-1 or PAR-4. But more importantly, in the case in which the individual has a level of HDL greater than 50 mh/dL and increased levels of PAR-1 or PAR-4, the claimed invention teaches that statin should be administered. Accordingly,

Whitney teaches away from the claimed invention because the claimed invention teaches to administer statins in situations that can be contrary to those teachings of the cited reference, and it is therefore surprising and unexpected based on the teachings of the cited reference.

In determining that individuals with increased levels of PAR-1 or PAR4 should be selected for statin administration, the inventors surprisingly determined that statins actually block or inhibit PAR-1 and PAR-4 action, which in turn reduced the shredding of platelets and clot formation. This relationship between statins and PAR-1 or PAR-4 had never been suggested nor contemplated by the cited art. This is a remarkable discovery that will unexpectedly change the way statins are administered because now physicians will screen patients based on the PAR-1 or PAR-4 levels, and not solely on cholesterol levels.

Hence, the claimed invention is not obvious in light of Whitney because the applicant is not claiming a mere observation, rather the applicant is claiming and changing the way individuals undergoing a thrombotic event are being treated, namely by selecting/assessing for increase levels of PAR-1 or PAR-4. This is a step not contemplated by the cited art. Furthermore, the discovery of this selection step is surprising and unexpected. Applicants have obviated this rejection by the arguments submitted, and respectfully request reconsideration.

### **CONCLUSION**

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner does not agree that the claims are in conditions for allowance, the examiner is *encouraged* to call the undersigned for an interview to discuss any remaining issues.

Respectfully submitted,

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